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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,178	07/19/2000	Donald J. Boulia	RSW9-2000-0054-US1	1042

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EXAMINER

DUONG, OANH L

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/619,178

Applicant(s)

BOULIA, DONALD J.

Examiner

Oanh L. Duong

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/12/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-31 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6-13, 15-22, 24-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al (Erickson) (US 6,412,009 B1) in view of Inala et al (Inala) (US 6,442,590 B1).

Regarding claims 1, 19 and 28, Erickson teaches a computer program product for sending Transmission Control Protocol (TCP) messages through Hyper Text Transfer Protocol (HTTP) systems, (e.g., see fig. 4 and abstract), the computer program product embodied on one or more computer-readable media, comprising:

computer-readable program code means for establishing a send channel from a first component on a client side of a network connection, through one or more HTTP-based systems, to a second component on a remote side of the network connection (e.g., see fig. 3 col. 3 lines 3-29);

computer-readable program code means for establishing a receive channel from the first component, through one or more HTTP-based systems, to the second component (e.g., see figs.3- 4 col. 3 lines 3-29 and col. 7 line 63-col. 8 line 4);

computer-readable program code means for establishing a first TCP connection from a client on the client side to the first component (e.g., see col. 7 lines 45-50);

computer-readable program code means for establishing a second TCP connection from the second component to a target server on the remote side (e.g., see col.7 lines 50-62);

computer-readable program code means for transmitting client-initiated requests from the client to the target server by packing the client-initiated TCP requests into HTTP messages (i.e., a data message complying with a connection-oriented protocol such as TCP is generated at an endpoint such as client. The data message is embedded into the chunked data message complying with a chunking option of an HTTP specification, col. 2 lines 43-48) which are transmitted on the send channel (e.g., see col. 2 lines 41-59); and

computer-readable program code means for transmitting server-initiated TCP requests from the target server to the client by packing the server-initiated TCP requests into HTTP messages (i.e., a data message complying with a connection-oriented protocol such as TCP is generated at an endpoint such as host-system/server. The data message is embedded into the chunked data message complying with a chunking option of an HTTP specification, col. 2 lines 43-48) which are transmitted on the receive channel (e.g., see col. 5 lines 53-58 and col. 7 lines 30-41).

Erickson does not explicitly teach the receive channel is distinct from the send channel.

Inala, in the same field of endeavor, teaches the receive channel is distinct from the send channel (col. 8 lines 30-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized two distinct channels of Inala in the process of transmitting and receiving message using HTTP protocol in Erickson because the use of two channels would enable data to be transmitted to and received from two separate connections. This would have improved the efficiency of transmission in term of cost and simplicity required for the connections.

Regarding claims 2, 20 and 29, Erickson-Inala teaches computer-readable program code means for receiving a TCP request from the client at the first component on the first TCP connection (Erickson, Fig. 3 col. 3 lines 18-20 and col. 3 line 66-col. 4 line 9); computer-readable program code means for packaging the received client-initiated TCP request in an HTTP POST request message (Erickson, col. 2 lines 41-47 and col. 8 lines 5-8); computer-readable program code means for sending the request to the second component (Erickson, col.10 lines 4-5); computer-readable program code means for receiving the sent request message at the second component (Erickson, col. 10 lines 6-13); computer-readable program code means for extracting the client TCP request from the received request message (Erickson, col. 7 lines 45-53); and computer-readable program code means for forwarding the extracted client TCP request to the target server on the second TCP connection (Erickson, col. 7 lines 45-53).

Regarding claims 3 and 21, Erickson-Inala teaches computer-readable program code means for acknowledging the HTTP POST request by sending an HTTP POST response from the second component to the first component (e.g., see col. 7 lines 3-15).

Regarding claims 4 and 22, Erickson teaches computer-readable program code means for receiving the response at the first component (e.g., see col. 7 lines 3-29); and computer-readable program code means for closing the send channel, responsive to operation of the computer-readable code means for receiving the response (e.g., see col. 2 lines 11-15).

Regarding claims 6, 15 and 24, Erickson teaches means for performing operation on the second TCP connection and packaging the TCP request in the message (e.g., see col. 7 lines 30-41).

Regarding claims 7, 16 and 25, Erickson teaches means for sending request message from the first component to the second component (e.g., see col. 10 lines 4-5); and means for receiving response at the first component (e.g., see 7 lines 3-13).

Regarding claims 8-9, 17-18 and 26-27, Erickson teaches a Multiple Purpose Internet Mail Extensions (MIME) type is set to binary/tcp (e.g., see col. 7 lines 3-29 and col. 8 lines 50-53).

Regarding claim 10, a system of claim 10 has a corresponding computer program product of claim 1; therefore, claim 10 is rejected under the same rationale as applied to claim 1.

Regarding claim 11, Erickson teaches means for receiving a TCP request from the client at the first component on the first TCP connection (e.g., see fig. 3 col. 3 lines 18-20 and col. 3 line 66-col. 4 line 9); means for packaging the received client-initiated TCP request in an HTTP POST request message (e.g., see col. 2 lines 41-47 and col. 8 lines 5-8); means for sending the request to the second component on the network connection (e.g., see col.10 lines 4-5); means for receiving the sent request message at the second component (e.g., see col. 10 lines 6-13); means for extracting the client TCP request from the received request message (e.g., see col. 7 lines 45-53); and means for forwarding the extracted client TCP request to the target server on the second TCP connection (e.g., see col. 7 lines 45-53).

Regarding claim 12, Erickson teaches means for acknowledging the HTTP POST request by sending an HTTP POST response from the second component to the first component on the network connection (e.g., see col. 7 lines 3-15).

Regarding claim 13, Erickson teaches means for receiving the response at the first component (e.g., see col. 7 lines 3-29); and means for closing the send channel, responsive to operation of the computer-readable code means for receiving the response (e.g., see col. 2 lines 11-15).

2. Claims 5, 14, 23 ab 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson in view Inala in further view of Fielding et al (RCF 2068).

Regarding claims 5, 23 and 30, Erickson-Inala teaches means for sending a message from the first component to the second component (Erickson, col.10 lines 4-5);

means for receiving the message at the second component (Erickson, col. 10 lines 6-13); means for receiving a server-initiated TCP request from the target server at the second component on the second TCP connection (Erickson, col. 7 lines 30-41); means for packaging the received server-initiated TCP request in a response message (Erickson, col. 7 lines 35-39); means for sending the message from the second component to the first component on the network connection (Erickson, col. 7 lines 39-41); means for receiving the message at the first component and extracting the server-initiated request from the message (Erickson, col. 7 lines 39-45); and means for forwarding the extracted server-initiated TCP request to the client on the first TCP connection (Erickson, col. 7 lines 42-45). Erickson-Inala does not explicitly teach HTTP GET request. However, Fielding discloses HTTP GET request (e.g., see page 43 section 9.3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Erickson-Inala in view of Fielding because such GET request would allow to retrieve only information identified by the Request-URI. This would have reduced unnecessary network usage (Fielding, page 43, section 9.3).

Regarding claim 14, Erickson-Inala teaches means for a message from the first component to the second component on the network connection (Erickson, e.g., see col. 10 lines 4-5); means for receiving the message at the second component (Erickson, col. 10 lines 6-13); means for receiving a server-initiated TCP request from the target server at the second component on the second TCP connection (Erickson, e.g., see col. 7 lines 30-41); means for packaging the received server-initiated TCP request in a

response message (Erickson, e.g. see col. 7 lines 35-39); means for sending the message from the second component to the first component on the network connection (Erickson, e.g., see col. 7 lines 39-41); means for receiving the message at the first component and extracting the server-initiated request from the message (Erickson, e.g., see col. 7 lines 39-45); and means for forwarding the extracted server-initiated TCP request to the client on the first TCP connection (Erickson, e.g., see col. 7 lines 42-45). Erickson-Inala does not explicitly teach HTTP GET request. However, Fielding discloses HTTP GET request (e.g., see page 43 section 9.3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Erickson-Inala in view of Fielding because such GET request would allow to retrieve only information identified by the Request-URI. This would have reduced unnecessary network usage (Fielding, page 43, section 9.3).

Regarding claim 31, Erickson teaches a system for providing bi-directional message over uni-directional protocol systems (Fig. 3), comprising:

a send channel established from a first component on a client side of a network connection, through at least one uni-directional protocol-based system, to second components on remote side of the network connection (Fig. 3 col. 3 lines 3-29);

a receive channel established from the first component, through the at least one uni-directional protocol-based system, to the second component (Figs 3-4, col. 3 lines 3-29 and col. 7 line 63-col. 8 line 4);

a first bi-directional protocol connection established between a client on the client side and the first component (col. 7 lines 45-50); and

a second bi-directional protocol connection established between the second component and a server on the remote side (col. 7 lines 50-62);

Wherein the first component (i.e., HTTP tunnel mechanism 128) packages client-initiated bi-directional protocol requests, which are sent from the client on the first bi-directional protocol connection and received at the first component (col. 7 lines 45-50), into uni-directional protocol messages and forwards the packaged client-initiated protocol requests to the second component using the second channel (col. 7 lines 45-50) and upon receipt of the forwarded client-initiated requests, the second component extracts the client-initiated bi-directional protocol requests and forwards the extracted client-initiated bi-directional protocol request to the server on the second bi-direction protocol connection (col. 7 lines 51-53), thereby providing client-to-server messaging through the at least one uni-directional protocol-based system (col. 2 lines 41-61); and

Wherein the second component (i.e., extension 132) packages server-initiated bi-directional protocol request (i.e., Telnet message), which are sent from the server on the second bi-directional protocol connection (i.e., HTTP) and received at the second component, into uni-directional protocol messages and forwards the packaged server initiated protocol requests to the first component using the receive channel (col. 7 lines 30-41) and upon receipt of the forwarded server-initiated requests, the first component extracts the server-initiated bi-directional protocol requests and forwards the extracted server-initiated bi-directional protocol requests to the client on the first bi-direction

protocol connection, thereby providing server-to-client message through the at least one uni-directional protocol-based system (.col. 7 lines 42-45).

Erickson does not explicitly teach the receive channel is distinct from the send channel.

Inala, in the same field of endeavor, teaches the receive channel is distinct from the send channel (col. 8 lines 30-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized two distinct channels of Inala in the process of transmitting and receiving message using HTTP protocol in Erickson because the use of two channels would enable data to be transmitted to and received from two separate connections (or channels). This would have improved the efficiency of transmission in term of cost and simplicity required for the connections (or channels).

Response to Arguments

3. Applicant's arguments filed 09/01/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Erickson teaches a system that provides a persistent HTTP tunnel (a technology that enables one network to send its data via another network's connections) for a connection-oriented protocol between two computers [col. 2 lines 41-59]. Inala teaches Two HTTP connections are opened (to server 17 for the purpose. One connection is for sending data and one is for receiving data) [col. 8 lines 30-32]. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have utilized the two HTTP connections (or channels) of Inala in the HTTP tunnel system of Erickson because such two HTTP connections would allow data to be transmitted to and received from two separate connections (or channels) [Inala, col. 8 lines 31-32]. This would have improved the efficiency of transmission in term of cost and simplicity required for the connections (or channels).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2155

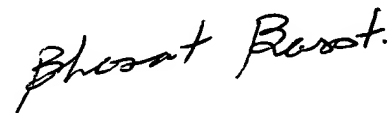
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh L. Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.D
March 18, 2005



BHARAT BAROT
PRIMARY EXAMINER